

## ABSTRACT

The present invention concerns a method and a system for measuring the thermal diffusivity.

Said method comprises the steps of:

- subjecting a surface region of an object to a modulated heating beam (3) while providing a signal (MLS) thereof, the heated spot or area (4) of the surface of the sample (2) having a definitive diameter and a fixed intensity distribution profile;
- providing a signal (MTS) proportional to the temperature of the heated spot area (4);
- determining the phase difference between the modulated beam signal (MLS) and the resulting modulated temperature signal (MTS);
- using said determined phase difference and the associated frequency to work out the thermal diffusivity value of said object (2).